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Oceans and the law of the sea

Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its fifteenth meeting

Letter dated 6 June 2013 from the Co-Chairs of the Consultative Process addressed to the President of the General Assembly

Pursuant to General Assembly resolution 68/70 of 9 December 2013, we were appointed as the Co-Chairs of the fifteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea.

We have the honour to submit to you the attached report on the work of the Informal Consultative Process at its fifteenth meeting, which was held at United Nations Headquarters from 27 to 30 May 2014. The outcome of the meeting consists of our summary of issues and ideas raised during the meeting and in particular, with regard to the topic of focus: "The role of seafood in global food security".

In line with past practice, we kindly request that the present letter and the report of the Informal Consultative Process be circulated as a document of the sixty-ninth session of the General Assembly, under the agenda item entitled "Oceans and the law of the sea".

(*Signed*) Milan Jaya **Meetarbhan**
Don **MacKay**
Co-Chairs

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Fifteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

(27-30 May 2014)

Co-Chairs summary of discussions[1]

1. The United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (the "Informal Consultative Process") held its fifteenth meeting from 27 to 30 May 2014 and, pursuant to General Assembly resolution 68/70, focused its discussions on the topic entitled "The role of seafood in global food security".

2. The meeting was attended by representatives of 80 States, 15 intergovernmental organizations and other bodies and entities and nine non-governmental organizations.[2]

3. The following supporting documentation was available to the meeting: (a) report of the Secretary-General on oceans and the law of the sea (A/69/71); and (b) format and annotated provisional agenda of the meeting (A/AC.259/L.15).

Agenda items 1 and 2
Opening of the meeting and adoption of the agenda

4. The two Co-Chairs, Don MacKay (New Zealand) and Milan Jaya Nyamrajsingh Meetarbhan (Mauritius), appointed by the President of the General Assembly, opened the meeting.

5. Opening remarks were made by Gyan Chandra Acharya, Under-Secretary-General and High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States; Nikhil Seth, Director, Division for Sustainable Development, Department of Economic and Social Affairs on behalf of the Under-Secretary-General for Economic and Social Affairs; and Stephen Mathias, Assistant Secretary-General for Legal Affairs on behalf of the Under-Secretary-General for Legal Affairs and United Nations Legal Counsel.

6. The meeting adopted the format and annotated provisional agenda and approved the proposed organization of work.

Agenda item 3
General exchange of views

7. A general exchange of views on the role of seafood in global food security, as reflected below (paras. 7-33), took place at the plenary meeting on 27 May. The discussions held on the topic of focus within the Panel segments are reflected in paragraphs 34 to 83 below.

8. Continued support for the Informal Consultative Process was expressed by several delegations. It was noted that the Informal Consultative Process had been a successful facilitator of the work of the General Assembly in reviewing

[1] The summary is intended for reference purposes only and not as a record of the discussions.

[2] A list of participants is available on the website of the Division for Ocean Affairs and the Law of the Sea at http://www.un.org/Depts/los/index.htm.

developments in ocean affairs and the law of the sea not least owing to the informal character of the Informal Consultative Process and the participation of the various disciplines and stakeholders in its meetings.

9. Many delegations highlighted the timeliness and critical importance of the topic of focus, which was considered of paramount importance for developing States. In this regard, delegations expressed appreciation for the report of the Secretary-General on oceans and the law of the sea (A/69/71).

10. Several delegations underlined the importance of the discussions on the topic of focus in the context of ongoing processes, in particular, the Open Working Group on Sustainable Development Goals, the post-2015 development agenda and the third International Conference on Small Island Developing States (Independent State of Samoa, September 2014). Reference was also made to the outcome of the "Global Oceans Action Summit for Food Security and Blue Growth" (the Netherlands, April 2014), which called for urgent coordinated action to secure the long-term well-being and food security of a growing population through a stand-alone sustainable development goal on oceans and seas.

11. Delegations underscored the important contribution of seafood to global food security and its relevance to the three pillars of sustainable development. They underlined that seafood played a significant but not yet fully recognized role in food security. The need to better integrate seafood into wider policy discussions on global food security was emphasized.

12. The importance of seafood as a means to improve food security and nutrition, particularly in developing countries where it was often the sole source of critical proteins, was highlighted by delegations. They noted that fish provided approximately 3 billion people with almost 20 per cent of their average animal protein and that fish was an important source of minerals, vitamins and micronutrients and an excellent source of long-chain omega-3 fatty acids, which were required for numerous normal body functions. Regular consumption of fish could reduce the risk of various diseases and disorders and benefit brain health and development and inflammatory conditions. The important contribution of seafood to food security as a key input in the production of food, such as fishmeal, was also noted. The need for education on the benefits of seafood as a healthy diet choice was underlined.

13. Many delegations recalled international commitments regarding the right to access sufficient, safe and nutritious food, consistent with the right to adequate food and the fundamental right to be free from hunger. Reference was made in particular to Millennium Development Goal 1, for the eradication of extreme poverty and hunger, and to the recognition in the outcome document of the 2012 United Nations Conference on Sustainable Development, "The future we want" (resolution 6/28, annex), that poverty eradication was the greatest global challenge. In that regard, several delegations noted ongoing challenges as reflected by continued high rates of chronic hunger and infant deaths caused by malnutrition, particularly in developing countries.

14. Delegations drew attention to the role of the seafood sector as a critical source of livelihood and income, in particular for developing countries that export fish products. It was noted that without fishing, many coastal communities would suffer. It was pointed out that fish was the single most traded food product in small island

developing States, valued at $25 billion a year and was integral to economies around the world. In this regard, it was noted that women represented the majority in secondary activities related to marine fishing and marine aquaculture, such as fish processing and marketing. Employment in aquaculture had enhanced the economic and social status of women in developing countries. The seafood sector also offered opportunities for young people to remain within local communities and contribute to their long-term sustainability.

15. The crucial role of healthy marine ecosystems, sustainable fisheries and sustainable aquaculture for food security, nutrition and livelihood was stressed by many delegations. It was emphasized that protecting the health, the productivity and the resilience of marine ecosystems was critical for global food security.

16. Attention was drawn by several delegations to the range of pressures that could affect marine biodiversity and the ability of marine ecosystems to contribute to global food security, including climate change; ocean acidification; invasive alien species; and pollution. Biodiversity loss threatened the capacity of marine ecosystems to fully deliver much-needed services and there was thus a need to balance sustainable use and conservation. Several delegations pointed out that economic incentives that lead to the loss of biodiversity needed to be balanced with those encouraging biodiversity conservation, including alternative employment opportunities.

17. The detrimental impacts on the marine environment from man-made pollutants that commonly entered the marine environment from land-based sources, including nanoplastics, persistent organic contaminants, antibiotics, pesticides, herbicides, chemical fertilizers, detergents, oil, sewage, plastics, heavy metals such as mercury and other solids were underlined. Several delegations also highlighted threats due to pharmaceuticals in the marine environment that had not been fully processed by the human body. These pollutants were collecting at ocean depths and consumed by small marine organisms, which then entered the global food chain. One delegation highlighted the threat of underwater noise pollution to at least 55 marine species, including 20 commercially valuable species of fish, and encouraged further studies on these links. It was noted that noise from air guns reduced fish catch rates for certain species including cod, haddock and herring, by 40 to 80 per cent.

18. Many delegations drew attention to the effects of unsustainable exploitation practices on seafood availability, illegal unreported and unregulated (IUU) fishing and destructive fishing practices. The need to address by-catch and discards and other adverse impacts on the ecosystem from fisheries was also emphasized. Delegations also noted concerns about harmful fishing subsidies and overcapacity, as well as unsustainable aquaculture practices. It was noted that the difference between the potential and actual net economic benefits from marine fisheries was approximately $50 billion annually, more than half the value of the global seafood trade.

19. Many delegations highlighted that almost 30 per cent of marine fish stocks remained overexploited or depleted. It was stressed that ocean systems were being pushed to the point of collapse, which threatened long-term food security. The invasion of lionfish in the Caribbean and the outbreak of jellyfish in the Black Sea and the Mediterranean Sea were highlighted as illustrations of the disruption being caused to marine ecosystems. A delegation also drew attention to the decline in

marine mammals and further underlined that many species of cetaceans lacked a global regulatory instrument.

20. The need to combat IUU fishing was stressed by many delegations, in particular as such practices contributed to overfishing, undermined conservation and management measures and resulted in losses in revenue and local employment. Current measures to combat IUU fishing were not considered sufficient and delegations were encouraged to ratify and implement the Port State Measures Agreement of the Food and Agriculture Organization of the United Nations (FAO) and to adopt integrated governance frameworks. Several delegations noted the link between illegal fishing and transnational organized crime.

21. Delegations recognized the important contribution of sustainable fisheries to global food security in small island developing States. In this context, several delegations expressed concern about the rate and scale of overexploitation of marine resources in the Pacific region, which threatened food security of the wider international community. A call was made for the international community to share the burden in ensuring the sustainable management of these resources.

22. Several delegations expressed concern over limited access to seafood in developing countries. Particular concerns were raised over exports that reduced the local supply of seafood and foreign fishing in the context of access agreements, which constrained the access of developing States to their own fish resources. They underlined the need to enhance developing countries' capacity to profit in a sustainable manner from their own resources by building capacity for exploitation of resources, improving marine science and enhancing monitoring, surveillance and control.

23. The importance of access to export markets was also highlighted. Several delegations expressed concern that unilateral trade barriers were being applied to the detriment of some exporting developing States. They called on the World Trade Organization to urgently address fisheries subsidies, which could exacerbate overcapacity, contribute to IUU fishing and affect trade in fish products by developing countries. It was emphasized that fisheries resources should not be seen as simply a source of foreign licence revenues.

24. It was stressed by many delegations that the future role of seafood in global food security depended on achieving sustainable fisheries and aquaculture. In this context, several delegations highlighted the role that aquaculture would need to play in meeting growing demands for seafood, given the limited additional production available from capture fisheries. It was recalled that aquaculture was the fastest growing animal-food-producing sector and was set to outpace population growth. The potential for other seafood types, including algae and sea cucumbers, to address growing seafood demand was also noted.

25. In terms of sustainable management measures, delegations emphasized the need for management objectives to obtain the maximum benefit from harvesting without reducing the value of the marine environment. Some delegations indicated that these objectives could be met through ecosystem information, stock assessments and improved fishing methods. In this context, it was noted that there was a need to take full advantage of existing international processes and legal frameworks to reduce overfishing, while implementing precautionary and ecosystem-based approaches.

26. It was emphasized that management measures needed to be based on credible, science-based, affordable and effective practices. Research was needed, for example, on the life histories of endemic species to learn the most effective protection patterns. Scientific studies were also needed to investigate the impacts and potential solutions to a range of challenges, including pollution, invasive species, coastal development and fragile ecosystems like coral reefs.

27. Some delegations drew attention to the key role of regional fisheries management organizations in achieving sustainable fisheries and reaching the goal of a sustainable exploitation of marine resources and, by extension, of food security. To that effect, the responsibility of coastal States within their maritime zones was also underscored.

28. Several delegations reported on current efforts to ensure sustainable fisheries management based on good governance, the best available science, the precautionary principle, broad stakeholder involvement and a long-term perspective. The new European Union Common Fisheries Policy, for example, aimed to maintain harvest stock populations at sustainable yield as soon as possible but not later than 2020, while also reducing by-catch, eliminating discards on a case-by-case basis and improving selectivity through adaptations to fishing gear.

29. In achieving sustainable fisheries and aquaculture, some delegations also noted the need to balance competing uses for a limited aquatic space, including through holistic approaches and integrated coastal management. In this context, delegations emphasized the need to maximize synergies through coordination and cooperation. It was noted that all sectors of the food industry, including harvesters, producers and transporters, needed to be involved in addressing global food security. It was suggested that scientific research could promote cross-cutting measures for regulating ocean resources. The importance of traditional knowledge was also highlighted, as was the role of consumers.

30. Many delegations highlighted the need for capacity-building and transfer of marine technology in order to improve food security in developing countries. Delegations recognized in this context the lack of infrastructure and capacity for the science-based management of resources. It was noted, for example, that lack of infrastructure had led to post-harvest losses equivalent to 30 per cent of catch in some areas. Several delegations underscored that actions needed to restore fish stocks to sustainable levels depended on the capacity of developing countries to conduct marine science and implement technology-based controls. Capacity-building in marine science was particularly important in undertaking scientific studies to establish the maximum sustainable yield of fish stocks. There was also a need for capacity-building in the enforcement of conservation and management measures, including assistance in the monitoring, control and surveillance of fishing activities.

31. Transfer of technology was highlighted by several delegations as an essential basis for the development of capacity-building and for benefit-sharing. In this regard, disparities in technologies threatened the sustainable use of resources. Several delegations reiterated the need in this context for the implementation of Part XIV of the United Nations Convention on the Law of the Sea.

32. Some delegations described current capacity-building initiatives to improve the sustainable management of fisheries resources in developing countries.

A delegate proposed an initiative to double every fifth year the capacity-building measures in developing States for the conservation and sustainable use of living marine resources and to increase the economic benefits from the sustainable use of living marine resources by 2030. Information was provided on the EAF-Nansen Project, which was administered by FAO, as an example of a successfully running programme of capacity-building for sustainable and ecosystem-based fisheries management.

33. Some delegations suggested that the development and enhancement of capacity-building would be more effective if cooperative links between regional institutions, through, for example, the establishment of mentoring and partnership linkages between north and south regional organizations, were created. In this regard, several delegations suggested that food security could also be a key element in developing concrete partnerships for small island developing States.

Area of focus: the role of seafood in global food security

34. In accordance with the annotated agenda, discussions in the Panel segments were structured around: (a) understanding global food security and the current role of seafood therein; (b) the role of seafood in global food security in the context of the three pillars of sustainable development; and (c) opportunities and challenges for the future role of seafood in global food security. The segments were launched by presentations from panellists, followed by interactive discussions.

1. Understanding global food security and the current role of seafood therein

(a) Panel presentations

35. In segment 1, Gro-Ingunn Hemre, of the National Institute of Nutrition and Seafood Research (Norway), highlighted the nutritional benefits of fish in the human diet and the challenge of addressing micronutrient deficiencies in developing countries and in low-income food-deficit countries. She explained that, as a rich source of protein and nutrients, such as iodine, zinc, vitamins A and D, calcium and phosphorous, and fatty acids, the consumption of fish had numerous benefits, including protection against nutrition-related diseases. The importance of sardines, anchovies and other small pelagic fish as some of the richest nutrient sources was highlighted.

36. Moses Amos, of the Secretariat of the Pacific Community, Division of Fisheries, Aquaculture and Marine Ecosystems, addressed the importance of fisheries resources to food security, livelihoods, economic growth and development in the Pacific Island countries and territories. He described the status of coastal fisheries resources, which were unable to meet demands for food security from a growing population. He also mentioned unsustainable patterns of economic growth and the impacts of climate change. Mr. Amos highlighted the need for effective fisheries management and improved access to fisheries resources, including oceanic fisheries such as tuna, as well as national food security policies and conservation measures to protect coastal fisheries resources.

37. Christophe Béné, of the Institute of Development Studies, Vulnerability and Poverty Reduction Team (United Kingdom of Great Britain and Northern Ireland) referred to the work of the High-level Panel of Experts of the Committee on World Food Security. He emphasized the importance of fish as one of the most efficient

converters of feed into high quality food, and in providing income and livelihoods. He noted challenges to the ecological sustainability of fisheries and aquaculture, while highlighting the socioeconomic benefits of small-scale fisheries. Mr. Béné drew attention to ongoing debates concerning international fish trade and food security in terms of maintaining the right to food of fishing communities while ensuring the availability of fish for all. He stressed that increasing demand for fish needed to be met by expansion in aquaculture.

(b) Panel discussions

38. Delegations emphasized the high nutritional value of seafood and noted the contribution of fish to the world's consumption of animal protein, which, for example, was higher than 60 per cent in some small island developing countries. Attention was drawn to the protein and nutritional value of different types of seafood. It was noted by the panellists that the protein content of fish of the same species, whether farmed or wild, was the same as it was determined by its genetic code; however, the nutritional content and level of fatty acids depended on what was consumed by the fish.

39. One panellist noted that the way seafood was prepared and consumed also had a considerable impact on its nutritional value. In this regard, marine pelagic fish that was consumed whole was considered to be the richest source of nutrients. It was suggested that production of smaller farmed fish that could be eaten whole could increase food security and provide better nutrition, particularly in developing countries.

40. One panellist indicated that fish could generally be grouped into four different categories, which generally reflected their nutritional profiles: lean freshwater, oily freshwater, lean marine and oily marine fish. It was noted that the nutritional difference between freshwater and marine oily fish was generally small, although some marine oily fish produced some level of fatty acids regardless of the feed used.

41. Given the high nutritional value of small pelagic fish such as sardines and anchovies, particularly if they were eaten whole, it was noted by an observer delegation that such species should be reserved for human consumption rather than used as fishmeal in aquaculture. One panellist indicated that their use as fishmeal could be justified in the light of continued technological advances that would reduce reliance on fishmeal for aquafeed and the promise of aquaculture for nutrition and food security. Another observer delegation wondered whether the worlds of aquaculture and agriculture would converge and allow for the symbiotic use of all food resources, so that agricultural resources could be used in aquaculture and fisheries resources (fishmeal) could be used in agriculture.

42. One delegation noted that scientific knowledge on the nutritional value of seafood could inform the activities of the international community and decision-makers. In this regard, the report of the High-level Panel of Experts on Food Security and Nutrition on Sustainable Fisheries and Aquaculture was mentioned by a panellist as a possible starting point for discussions on food security and fisheries. A delegation highlighted the need to facilitate the granting of consent for marine scientific research in areas within national jurisdiction.

43. Delegations also considered the recommended intake of fish protein and how alternative sources of nutrients, other than seafood, compared to fish nutrients in

terms of cost and availability. In this regard, one panellist observed that all animal protein was considered to be beneficial and there was no established comparative advantage of one form of animal protein, such as fish protein, over another. It was noted, however, that animal protein in general compared more favourably to vegetable sources such as soy, which lacked key nutrients.

44. One panellist emphasized the importance of developing alternative sources of fish and alternative sources of income to relieve pressure on coastal fisheries, particularly in the light of the choice faced by many communities between food security today and environmental sustainability tomorrow. The importance of education and raising awareness at the local level to improve resource management was also underscored. In this regard, it was noted that helping to identify low-cost alternative sources of nutrition would relieve pressure on fish stocks and ensure their sustainable management. The importance of preserving sensitive marine ecosystems, such as mangroves, was emphasized. It was pointed out that mangrove forests serve as physical barriers to storms, act as nurseries for fish, offer habitats for birds and stop land erosion.

45. It was noted by one panellist that in the Pacific, initiatives were taking place to utilize fish aggregating devices for subsistence and artisanal fisheries, to redirect fishing efforts away from coastal fisheries and towards small pelagics and to develop the small-scale freshwater and marine aquaculture sector, including sea cucumber farming. The Secretariat of the Pacific Community provided scientific advice on management of fisheries resources to member countries and further assisted small-scale fishers to develop their capacity to access oceanic fish resources for subsistence purposes, with any excess sold in markets. Several delegations raised concerns over the use of fish aggregating devices, given their potential to act as an ecological trap for by-catch and alter stock migration of certain species such as tuna. In response, it was noted that the use of fish aggregating devices supported by the Secretariat of the Pacific Community was confined to coastal pelagics up to 500 m from the shore.

46. Some delegations noted the effectiveness of aquaculture in providing food security compared to farming or other land-based activities. One panellist noted that community-based aquaculture contributed to food security by yielding high production at a low cost and by compensating for the declining supply from coastal fisheries. Another panellist indicated that aquaculture was much more efficient in terms of protein conversion compared to all other livestock production systems. It was suggested that aquaculture should be prioritized by States for the purpose of providing food security and nutrition.

47. Some panellists highlighted the substantial contribution of small-scale aquaculture to food security particularly in terms of improving the livelihoods of fish producers. One panellist noted technological innovation and progress in aquaculture development that would allow producers to meet the increasing demand for fish in a more sustainable way.

48. It was noted in this context that, although offshore mariculture could reduce competition over ocean space, the industry remained highly intensive, in terms of technological and financial inputs, and was not considered, at this stage, to be a long-term solution for food security for many countries.

49. Delegations also considered the safety of fish consumption in the light of the range of pollutants in the marine environment and new types of contaminants in farmed species. In this regard, it was noted that the risks associated with the consumption of seafood were outweighed by the nutritional benefits. One panellist noted in this context that all food sources were contaminated to some extent by pollutants and chemicals. In addition, many countries had in place regulations to monitor the contaminant levels in seafood to ensure fish and fish products were considered safe for human consumption.

2. The role of seafood in global food security in the context of the three pillars of sustainable development

(a) Panel presentations

50. In segment 2, Brian Crawford, of the University of Rhode Island, Graduate School of Oceanography, Coastal Resources Center (United States of America), focused on the importance of small pelagic fish and their nutritional role in the supply of protein for coastal communities in developing countries. He noted threats from overfishing and overcapacity, subsidies, poor governance and IUU fishing, and stressed the need for improvements in ecosystem-based management, access and user rights regimes, the fish value chain and distribution systems, as well as enforcement. It was also essential to ensure that resource control and foreign investment did not divert locally needed fish to export markets. Mr. Crawford also highlighted the important role of women throughout the fish value chain.

51. Geoffrey Shaw, of the International Atomic Energy Agency (IAEA), discussed the need to build capacity to better understand changes in the marine environment, including from ocean acidification and widespread pollution, as well as related impacts to food security. He described the work of IAEA in providing expert advice on protecting consumers from radioactive and non-radioactive contamination of fish and shellfish; knowledge of nuclear and isotopic techniques for measuring occurrence, levels and impacts of pollutants and toxins in biota, including edible organisms; and capacity-building for assessing the sustainable and safe use and development of seafood.

52. Paúl Phumpiu, Vice-Minister for Fisheries, of the Ministry of Production (Peru), described the important contribution of small pelagic fishes to food security as a resource high in protein that was readily available and affordable, and the role of Peru in providing approximately one fifth of the world's production of pelagic fish, a significant portion of which was exported to developing countries. He highlighted Peru's "blue capital" approach, based on ecosystem sustainability, adaptive institutions, market organization and social responsibility, and an initiative to increase the biomass of pelagic fish and the proportion of fish production used for direct human consumption.

53. Margaret Nakato, of the World Forum of Fish Harvesters and Fish Workers, described challenges faced by small-scale fishers, such as competition with industrial fishing, that deprive local communities of food supplies and threaten livelihoods. She stressed the value of small-scale fishing as a model of production and the need to ensure that fishers and fish workers had the necessary rights to fishery resources and land, as well as a say in governance. She also stressed the human rights dimension of food security and the importance of the right to adequate food, as well as the need to empower women in the fishing sector, coordinate policy

in food security, implement existing instruments and harmonize sectoral approaches and capacity-building.

54. Wan Izatul Asma binti Wan Talaat, of Universiti Malaysia Terengganu, Institute of Oceanography and Environment, highlighted efforts to enhance the role of seafood in food security and address threats facing the coastal and marine resources, including in the context of the Coral Triangle Initiative. She described initiatives in Malaysia to establish marine-protected areas and aquaculture intensive zones and innovative approaches to bridge the gap between scientific research and governance.

(b) Panel discussions

55. The important role of small pelagic species, for example, anchovies and sardines, in the context of food security was highlighted, in view of their high nutritional value and low cost. One panellist noted that both industrial and small-scale fisheries should be developed in order to enhance the food security and economic potential of these species, with priority given to meeting the nutritional needs of local communities. One panellist noted that these species were mostly used in the production of fishmeal, for indirect human consumption; however, further consideration should be given to their use for direct human consumption by local communities and for exports. It was also important to ensure the continued role of these species in the trophic food chain and to take into consideration the needs of dependent species when determining catch allocations.

56. A delegation queried how to introduce small pelagic species into communities that did not consider them to be part of their traditional diets. One panellist noted initiatives to promote consumption of anchovies in Peru through marketing and education campaigns on the nutritional value of these species. It was recalled that these species could be used as fishmeal or fish oils for other food production practices, where direct human consumption was not considered an option.

57. Delegations also considered the need to address current pressures on small-scale fisheries. In this regard, one delegation highlighted the need for governance and management policies to address the impacts of overfishing and IUU fishing, particularly in the light of the reliance of fishing communities in developing countries on small-scale fisheries for food security. One panellist noted that technological devices, such as satellite-connected tracking devices, combined with the assistance of local communities as observers, were an effective tool to enhance monitoring, control and surveillance. The management challenges associated with the effects of climate change were also noted.

58. A delegation suggested that fishing overcapacity could be reduced by creating alternative livelihoods for fishers. In this regard, one panellist noted the difficulties in considering this challenge at scale, given the number of people involved in fisheries and aquaculture and the limited employment opportunities at local community level. In order to significantly reduce overcapacity, social safety nets needed to be developed to mitigate the exit of thousands of fishers and fish workers from the industry. One panellist highlighted the benefits of training in literacy, credit and financing. The importance of diverse income streams within households was also highlighted.

59. A delegation underscored the need to develop equitable and responsible governance and trade systems, in view of the role that sustainable fisheries and aquaculture played in enhancing food security and economic development. Emphasis was placed in this regard on unlocking the economic potential of safe aquaculture practices for food security. It was noted that the adoption of responsible policies and effective institutions could enhance food security, in particular when governance frameworks facilitated the participation of small-scale fishing communities in decision-making. One panellist noted the benefits of rights-based management systems, to encourage responsible use of marine resources and participation in governance and to generate tax revenues.

60. Some delegations noted the need to carefully consider investments in other sectors, such as real estate and tourism, which could displace small-scale fishing communities and limit access to fishing grounds, thus reducing food security and income. One panellist noted that investment in these sectors was often poorly coordinated due to the different interests of the stakeholders involved. The importance of integrated management at all levels, including multisectoral management and integration to enhance food security was highlighted.

61. Concerns were also expressed by some delegations over the impact of marine pollution on seafood. One panellist noted that toxins were not eliminated by the freezing and cooking of seafood and highlighted the need for water and sanitation programmes to address sanitary concerns. Another panellist underscored the importance of detecting toxins before they entered the human food chain, including through nuclear technologies. In that regard, a delegation cited concerns over the use of nuclear and isotopic techniques in relation to seafood contamination. In response, a panellist noted that such techniques were routinely used in common research applications.

62. Some delegations welcomed information on empowering women in local fisheries management in order to eradicate poverty. It was noted in this regard that an increased role for women could lead to increased food security. One panellist emphasized that half of the workforce in fisheries in some developing countries was comprised by women in very diverse roles. Delegations discussed the need to develop best practices to engage women in the fisheries industry and, in particular, to ensure access to credit, improved working conditions and improved sanitation in processing factories. The importance of education was emphasized, including education in the value of fish as a source of nutrition. There was also a need to enable access to credit and training in financing to allow women to diversify their role in the fishing industry beyond subsistence fishing and post-harvest work.

63. In this regard, another panellist noted the low percentage of women in larger scale fishing activities, due to lack of access to medium-scale credit. It was suggested that through associations women could aggregate their products and obtain access to larger credit sources and markets. This panellist also suggested that women should be granted an enhanced role in resource management, since fishing practices at sea could have an impact on their post-harvest activities.

64. More generally, delegations noted the importance of capacity-building, training and access to credit for sustainable small-scale fisheries. Capacity-building and infrastructure development, in particular, could address differences in per capita consumption of fish in coastal and inland populations, including in landlocked States. One panellist highlighted the need for infrastructure related to refrigeration

and safe storage of fish, which could allow fresh seafood to reach inland populations. The need for additional financial resources, access to credit and training opportunities was highlighted in this regard.

65. A delegation noted that the discussions during this panel segment reinforced the importance for oceans to be part of the post-2015 development agenda. In this context, support was expressed for a stand-alone goal on oceans with a view to maintaining healthy and productive oceans and seas and hence supporting food security, livelihoods and the empowerment of women.

3. Opportunities and challenges for the future role of seafood in global food security

(a) Panel presentations

66. In panel 3, Rohan Subasinghe, of FAO, Aquaculture Branch, described challenges in supplying safe and nutritious seafood to a growing global population, including the need to improve the contribution of capture fisheries through better management, ensure sustainable and increasing growth in aquaculture and reduce waste in the seafood value chain. He highlighted opportunities and challenges in sustaining aquaculture growth including technology and innovations (for example, reducing fishmeal and fish oil in feed), investment and finance, policy and governance and improved public-private partnerships.

67. Manuel Barange, of Plymouth Marine Laboratory (United Kingdom of Great Britain and Northern Ireland), described anthropogenic climate change and population growth as the two main challenges in producing enough seafood. He indicated that meeting current seafood consumption rates was only feasible under certain conditions, namely managing and using global fish resources efficiently and sustainably, reducing the reliance of the aquaculture industry on wild fish for feed through significant technological development, and ensuring the effective distribution of wild fish products based on food needs. He explained that the impacts from climate change would not be consistent across regions and countries and would be mitigated or exacerbated based on dependency on the resources, which demonstrated a need to improve management effectiveness and trade practices.

68. Susan Singh-Renton, of the Caribbean Regional Fisheries Mechanism, highlighted regional challenges for enhancing food security, including lack of policy coherence across sectors and marginalization of fisheries issues, as well as limited advancement in statistics and research, technological developments and marketing and trade. Ms. Singh-Renton noted initiatives at the regional level to address these challenges, including by improving policy coherence, establishing fisheries management objectives based on food security, strengthening fisherfolk capacity for participatory fisheries management, developing technical capacity for ecosystem approaches to fisheries and increasing capacity for managing seafood safety and quality standards.

69. Roland Wiefels, of Centro para los servicios de información y asesoramiento sobre la comercialización de los productos pesqueros de América Latina, described challenges and opportunities related to post-harvest issues and stressed the need to adapt seafood processing, distribution and marketing networks and the location of production sites to population growth and geographical distribution. He emphasized the importance of increased diversification of aquaculture species, reduction of

production costs through economies of scale, improved transport facilities and enhanced regional trade.

70. James Movick, of the Forum Fisheries Agency, described opportunities and challenges in the co-management of tuna fisheries of the western tropical Pacific, and the need to increase economic growth for Pacific small island developing States (in whose exclusive economic zones most of the tuna resources were found), including through harvest control rules and rights-based management. Particular challenges included decision-making processes in regional fisheries management organizations, a disproportionate burden on small island developing States of the costs of conservation and management, high utility and transport costs and remoteness from export markets, and combatting IUU fishing in large maritime spaces with limited financial resources.

71. Nobuyuki Yagi, of the University of Tokyo, Graduate School of Agricultural and Life Sciences, outlined the role of consumers in supporting responsible fisheries and marine ecosystem conservation and productivity through eco-labelling schemes. He noted that, while current eco-labelling schemes had positive aspects, further consideration needed to be given as to how to support the livelihoods of small-scale fishers in developing countries and to help maintain marine and coastal ecosystems services.

72. Janos Pasztor, of World Wide Fund for Nature International, emphasized that healthy ocean ecosystems were a prerequisite for food security and livelihoods based on seafood and highlighted the need for a new integrated approach to management, based on what an ecosystem could sustainably produce. He noted that opportunities for oceans in future global food security depended on political will and the involvement of all stakeholders to address cumulative impacts, which required rebuilding and sustainably managing fisheries, mitigating impacts from land-based and sea-based activities and managing ocean uses in an integrated holistic manner. He expressed his support for an implementing agreement to the United Nations Convention on the Law of the Sea.

(b) Panel discussions

73. In the ensuing discussions, delegations highlighted a number of particular challenges and opportunities for the future role of seafood in global food security. With regard to increasing population and demand for seafood, it was stressed that international trade should reflect the need for food instead of profit. It was noted, in this regard, that fish should not only go where the money is, but should go where the need is. In this context, an observer delegation noted that, beyond a certain per capita gross domestic product (GDP) level, demand for meat and seafood depended on cultural preferences instead of need. Another panellist expressed the view that GDP per capita was not an effective index to assess the buying power of populations because it was an average figure. Another panellist explained that demand from industrialized countries sometimes jeopardized the interests of poorer countries and indicated that this issue needed to be addressed through intergovernmental processes.

74. Concerning the impacts of climate change and pollution, clarification was sought on whether ocean acidification was taken into account in models assessing the countries that might lose or gain in terms of fisheries production. One panellist elaborated that there were difficulties in assessing the impacts of ocean

acidification. It was explained that ocean acidification would not halt production in the oceans; however, food webs would need to restructure themselves owing to impacts on different species. With regard to queries on how to regulate climate change, another panellist highlighted eco-labelling, such as an anti-climate change label, as a potential useful tool.

75. Attention was drawn to the impacts on fisheries and food security owing to pollution from ocean noise, including from the oil and gas industry, and a request was made for FAO to carry out further studies on the topic, as encouraged by the General Assembly. Some delegations supported the need for such studies and suggested that the Caribbean Regional Fisheries Mechanism could participate in this research.

76. A question was raised about whether marine-protected areas had a positive effect on food security, since such areas often excluded fisheries communities. In that regard, a panellist indicated that there had been an evolution in the implementation of marine-protected areas, including through greater involvement of, and access for, local communities so as to enhance their food security.

77. With regard to fisheries governance, one panellist noted that the merging of fisheries and agriculture departments in States has in some cases resulted in the relative marginalization of fisheries interests. The panellist explained that developing countries had limited capital. She also mentioned that there was little infrastructure for monitoring industry performance to promote better returns and consequent investments in the sector so that more attention could be given to fisheries under agricultural portfolios. The panellist suggested that a determined effort should be made to estimate the value of fisheries.

78. Some delegations highlighted the monitoring, control and surveillance systems used by Pacific small island developing States to combat IUU fishing. The success in the region was attributed by one panellist to regional cooperative efforts, including with patrol support from developed countries, and shared IUU vessel lists. The panellist explained that foreign fishing vessels were required to refrain from fishing in specified high seas areas as a precondition to being allowed to fish in any exclusive economic zone of the coastal States in the region.

79. A delegation emphasized the need to build the capacity of developing countries with regard to IUU fishing and for cooperation in developing effective management mechanisms. Complications that may arise in relation to the management of fish stocks in the event that maritime areas are subject to overlapping claims were mentioned by a delegation.

80. In terms of bridging the gap in food demand and supply through the intensification of aquaculture, one panellist emphasized the need for sustainable intensification, as well as the need to improve social and environmental performance by promoting more efficient energy and resource use. The continued importance of wild fisheries in providing the base load supply of edible fish was emphasized by an observer delegation in this context. Developments in programmes to support disease prevention and management in aquaculture were noted, including difficulties in developing vaccines for tropical fish compared to temperate fish.

81. Concerns were also expressed about the challenges for developing countries in moving aquaculture off shore, given the capital investment necessary for equipment, logistics and vessels. One panellist acknowledged that current trials for offshore

mariculture were expensive and not necessarily well-suited to resource-poor countries.

82. With regard to concerns over rapid price fluctuations and income inequality in the value chain, one panellist suggested the use of certification or eco-labelling schemes. Some delegations observed that eco-labelling could also result in income gaps owing to differences in the capabilities of various fisheries, especially those in developing countries, to comply with eco-labelling criteria, for example, in estimating maximum sustainable yield.

83. Another panellist noted that eco-labelling schemes did not generally take into account small-scale fisheries, in particular in developing countries, which relied on different practices. One panellist expressed the view that most consumers around the world, especially those in developing countries, did not consider eco-labelling when buying fish and were more likely to pay attention to religious dietary labels, for example, halal and kosher. It was suggested that one useful aspect of eco-labelling was in combating IUU fishing.

Agenda item 4
Inter-agency cooperation and coordination

84. The Director of the Division for Ocean Affairs and the Law of the Sea made a statement on behalf of the focal point for UN-Oceans, the United Nations Legal Counsel/Division for Ocean Affairs and the Law of the Sea,[3] providing information on the activities of UN-Oceans since the approval, by the General Assembly in resolution 68/70, of revised terms of reference for UN-Oceans. She recalled that the revised terms of reference provided for reporting by UN-Oceans to ensure transparency and accountability.

85. She informed the meeting that, in order to respond to the revised terms of reference on participation in UN-Oceans, an invitation dated 20 December 2013 had been circulated to United Nations system organizations with competence in ocean and coastal areas. As a result, the current membership of UN-Oceans now consisted of 22 United Nations entities and the International Seabed Authority.

86. She stated that UN-Oceans had convened three teleconferences and had held two face-to-face meetings on 5 February and 27 May 2014, the latter of which was held on the margins of the present meeting of the Informal Consultative Process. She highlighted that UN-Oceans had adopted a biennial work programme at its February meeting. Among the activities foreseen in that work programme, she noted that the development of an inventory of mandates and activities of the members of UN-Oceans was under way, for the purpose of facilitating the identification of possible areas for collaboration and synergies as mandated under the revised terms of reference. Furthermore, two ad hoc coordination teams had been established; one focused on World Oceans Day 2014, and the other on the third United Nations Conference on Small Island Developing States, which would take place from 1 to 4 September 2014, in the Independent State of Samoa. She stated that, at its 27 May 2014 meeting, UN-Oceans had exchanged information on planned events and activities, which would be posted on the UN-Oceans website, and had discussed continued updates and improvements to the UN-Oceans website, as well as refinements to the inventory of mandates and activities prior to making it available

[3] The full text of the statement is available on the website of UN-Oceans at www.unoceans.org.

on the UN-Oceans website. She emphasized the importance placed by UN-Oceans members at the meeting on using the UN-Oceans mechanism, including its website, as a means of information-sharing.

87. Delegations expressed appreciation for the update on the work of UN-Oceans, welcoming the increased transparency and effectiveness in the work of UN-Oceans. They also expressed satisfaction with the work programme.

88. Several delegations emphasized the importance for UN-Oceans of continuing to focus on ensuring coherence within the United Nations system on ocean issues, in order to prevent duplication of efforts among relevant United Nations entities. They further expressed confidence that, under its revised terms of reference, UN-Oceans would strengthen coordination and cooperation among competent organizations in conformity with the United Nations Convention on the Law of the Sea and their respective mandates, and facilitate inter-agency information exchange, including best practices and experiences, tools and methodologies.

89. Delegations expressed their appreciation to and reiterated their support for the United Nations Legal Counsel/Division for Ocean Affairs and the Law of the Sea as focal point for UN-Oceans.

Agenda item 5
Process for the selection of topics and panellists so as to facilitate the work of the General Assembly

90. The Co-Chairs introduced item 5, noting that it reflected paragraph 268 of General Assembly resolution 68/70. Delegations were invited to provide their views and make proposals on ways to devise a transparent, objective and inclusive process for the selection of topics and panellists, so as to facilitate the work of the General Assembly. Several delegations were of the view that the concept notes elaborating on the proposed topics should be circulated in time for consideration during the first round of informal consultations on the annual draft General Assembly resolution on oceans and the law of the sea. This would enable an exchange on the proposed topics during the first round of informal consultations and also allow for continued discussion during the second round of informal consultations, when the topic of focus would be agreed upon. The meeting noted that this method for making proposals had been successfully used in the past and could also facilitate the timely identification of suitable experts.

91. The Director of the Division for Ocean Affairs and the Law of the Sea provided an update on the status of the Voluntary Trust Fund for the purpose of assisting developing countries, in particular small island developing States and landlocked developing States, to attend the meetings of the Informal Consultative Process. It was pointed out that the Voluntary Trust Fund played an important role in facilitating the participation of representatives and panellists from developing States in meetings of the Informal Consultative Process and delegations were invited to consider contributing to it. New Zealand noted that its contribution to the Fund signalled the importance it assigned to the Informal Consultative Process and to the participation of developing States and small island developing States therein.

Agenda item 6
Issues that could benefit from attention in the future work of the General Assembly on oceans and the law of the sea

92. The Co-Chairs drew attention to the composite streamlined list of issues that could benefit from attention in the future work of the General Assembly on oceans and the law of the sea and invited comments from delegations. No delegation requested the floor under this agenda item. The Co-Chairs invited any delegation wishing to propose additional issues for inclusion in the list to submit them to the Co-Chair or the Secretariat in writing before 30 May 2014. Subsequently, the Secretariat has received a proposal to add to the list of issues, "An examination of the threats, including cumulative impacts, to marine species from indirect human actions and an exploration of practical, ecosystem-based approaches to mitigate those threats. Such threats could include chemical and noise pollution, coastal development and other indirect human threats."